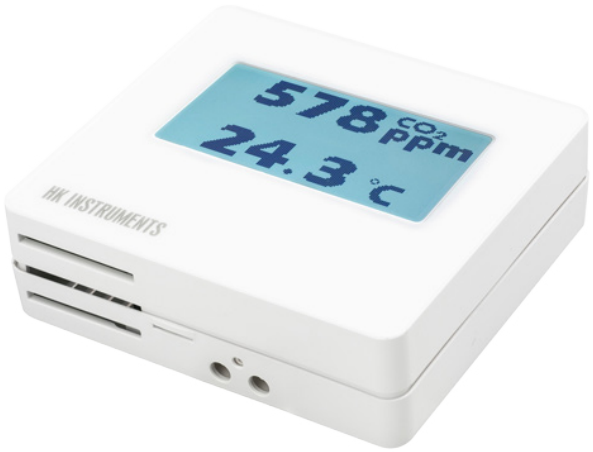
CARBON DIOXIDE TRANSMITTERS CDT2000 SERIES

Multifunctional, wall mount CO_2 transmitters for building automation systems

5 YEAR WARRANTY



The CDT2000 series air quality transmitters are engineered for building automation systems in the HVAC/R industry. The CDT2000 series measures carbon dioxide (CO_2), utilizing the industry standard NDIR measurement principle, and temperature (T). Optional relative humidity (rH) measurement is also available in the same device. The CDT2000 series devices are available with large touchscreen display making the configuration of the device quick and easy.

The CDT2000 series transmitters calibrate themselves automatically using ABC™ logic. The ABC™ logic requires that the space in which the transmitter is used needs to to be unoccupied for four hours per day so that the indoor CO_2 concentration drops to the outside level. CDT2000-DC is a dual channel model with a measuring channel and a reference channel that makes a continuous comparison and the necessary adjustment accordingly. CDT2000-DC is also suitable for buildings that are continuously occupied.

CDT2000 series devices include:
- Separate field configurable output for each measurement parameter (CO_2, rH, T).
- Proportional output options including: voltage (0–10 V, 2–10 V) and current (4–20 mA).
- Offset feature enabling field calibration for each measurement parameter (CO_2, rH, T)

CDT2000 series device options offer:
- 2” x 3” touchscreen display
- Field configurable relay for any of the three parameters
- Modbus configuration

APPLICATIONS

CDT series devices are commonly used to monitor:
- CO_2 and humidity levels in offices, public spaces, meeting rooms and classrooms
- CO_2 levels of return air in ventilation systems
- incoming air and return air humidity levels in ventilation system
- humidity in various industrial applications
- temperatures in HVAC/R environment
- CDT2000-DC series devices can also be used in applications where there is a constant source of carbon dioxide present (for example hospitals and greenhouses)

MODEL SUMMARY

	CDT2000			**CDT2000-rH**	
Description	**Model**	**Product code**	**Description**	**Model**	**Product code**
Carbon dioxide transmitter for room	CDT2000	301.001.001	Carbon dioxide and humidity transmitter for room	CDT2000-rH	301.003.001
- with display	CDT2000-D	301.001.002	- with display	CDT2000-rH-D	301.003.002
- with relay and display	CDT2000-1R-D	301.001.003	- with relay and display	CDT2000-1R -rH-D	301.003.003
- with Modbus configuration and display	CDT-MOD-2000-D	301.001.004	- with Modbus conguration and display	CDT-MOD-2000-rH-D	301.003.004
- with Modbus configuration, relay and display	CDT-MOD-2000-1R-D	301.001.005	- with Modbus conguration, relay and display	CDT-MOD-2000-1R-rH-D	301.003.005
- with dual channel sensor	CDT2000-DC	301.005.001	- with dual channel sensor	CDT2000-DC-rH	301.006.005
- with dual channel sensor and display	CDT2000-DC-D	301.005.002	- with dual channel sensor and display	CDT2000-DC-rH-D	301.006.001
- with dual channel sensor, relay and display	CDT2000-DC-1R-D	301.005.005	- with dual channel sensor, relay and display	CDT2000-DC-1R-rH-D	301.006.002
- with Modbus configuration, dual channel sensor and display	CDT-MOD-2000-DC-D	301.005.003	- with Modbus configuration, dual channel sensor and display	CDT-MOD-2000-DC-rH-D	301.006.003
- with Modbus configuration, dual channel sensor, relay and display	CDT-MOD-2000-DC-1R-D	301.005.004	- with Modbus configuration, dual channel sensor, relay and display	CDT-MOD-2000-DC-1R-rH-D	301.006.004

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CARBON DIOXIDE TRANSMITTERS
CDT2000 SERIES

SPECIFICATIONS

Performance

Measurement ranges:
CO_2: 400–2000 ppm
Temperature: 0...50 °C
Relative humidity: 0–100 %
Accuracy:
CO_2: ±40 ppm + 2 % of reading, DC model: 75 ppm or 10 % of reading (whichever is greater)
Temperature: <0.5 °C
Relative humidity: ±2...3 % at 0...50 °C and 10–90 % rH
Total error band includes accuracy, hysteresis and temperature effect over 5...50 °C and 10–90% rH.

Technical Specifications

Media compatibility:
Dry air or non-aggressive gases
Measuring units:
ppm, °C and % rH
Measuring element:
CO_2: Non-dispersive infrared (NDIR)
Temperature: Pt1000 (models without rH-measurement)
Integrated (models with rH-measurement)
Relative humidity: Thermoset polymer capacitive sensing element
Calibration:
Automatic self-calibration ABC Logic™ or continuous comparison (DC)
Environment:
Operating temperature: 0...50 °C
Storage temperature: -20...70 °C
Humidity: 0 to 95 % rH, non condensing

Physical

Dimensions:
Case: 99 x 90 x 32 mm
Weight:
150 g
Mounting:
3 screw holes slotted, 3.8 mm
Materials:
Case: ABS
Protection standard:
IP20
Display (Optional)
Touchscreen
Size: 77.4 x 52.4 mm
Electrical connections:
Power supply:
5-screw terminal block
(24 V, GND, CO_2, rH, T)
0.2–1.5 mm² (12–24 AWG)
Relay out:
3-screw terminal block
(NC, COM, NO)
0.2–1.5 mm² (12–24 AWG)

Electrical

Input: 24 VAC or VDC, ±10 %
Current consumption: max 90 mA (at 24 V) + 10 mA for each voltage output or 20 mA for each current output
CO_2 output signal:
0–10 V, R>1 kΩ
2–10 V, R>1 kΩ (optional voltage output, display required)
4–20 mA, R<500 Ω
Temperature output signal:
0–10 V, R>1 kΩ
2–10 V, R>1 kΩ (optional voltage output, display required)
4–20 mA, R<500 Ω
Relative humidity output signal:
0–10 V, R>1 kΩ
2–10 V, R>1 kΩ (optional voltage output, display required)
4–20 mA, R<500 Ω
Relay out:
SPDT Relay, 250 VAC / 30 VDC / 6 A
Adjustable switching point and hysteresis

Conformance

Meets requirements for CE marking:
EMC Directive 2014/30/EU
RoHS Directive 2011/65/EU
LVD Directive 2014/35/EU
WEEE Directive 2012/19/EU

COMPANY WITH MANAGEMENT SYSTEM CERTIFIED BY DNV GL
= ISO 9001 = ISO 14001 =

RoHS 2 2011/65/EU

HOW TO GENERATE A MODEL?

Example: CDT2000-1R-D	Product series					
	CDT2000	Carbon dioxide transmitter, analog configurations				
	CDT-MOD-2000	Carbon dioxide transmitter, Modbus configuration				
		Calibration				
			ABC logic™, Automatic Background Calibration			
		-DC	Dual channel, for continuously occupied space			
			Mounting			
				Wall mount		
				Relay		
				-1R	With relay	
					Without relay	
					Relative humidity sensor	
					-rH	With relative humidity sensor
						Without relative humidity sensor
						Display
						-D With display
						Without display
Model	CDT2000			-1R		-D

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